

Brandywine DRMO

EPA Region 3

Maryland
Prince George's
County
Brandywine

EPA ID# MD9570024803

2nd Congressional District

Last Update:

November 22, 2002

Other Names: None

Current Site Status

EPA and Maryland Department of the Environmental (MDE), and Prince George County Health Department (PGCHD) continue to work with the U.S. Air Force (AF) to investigate and clean up the Brandywine Defense Reutilization and Marketing Office (DRMO) site. The remedial investigation and feasibility study (RI/FS) began in December 2001. The AF received access to the adjacent Conrail property in July. The Conrail property was owned by the U.S. government previously. The rail lines were used to deliver wastes to the DRMO. EPA, MDE, and PGCHD received the draft technical memorandum in late April and met to define the subsequent phase of the investigation. Phase 2 was delayed until October 2002 after DoD allocated money to complete the investigation. Phase 2 focuses on additional groundwater characterization.

Site Description

The DRMO site is an inactive U.S. Department of Defense (DOD) facility that occupies approximately eight acres of land. The U.S. Navy operated the site as a storage yard and marketing office from an unknown date until 1955, when it was transferred to the U.S. Air Force. In 1973, the Defense Supply Agency (DSA) assumed control of the site, and the Defense Property Disposal Organization (DPDO) received a permit from Andrews Air Force Base (AAFB) to use the property. The Brandywine DRMO site is located in southern Prince George's County, Maryland, about 8 miles south-southeast of AAFB. The site lies within the Potomac River Basin.

From approximately 1953 until 1988, the DRMO site was used principally as a storage area for surplus electrical equipment, other materials, and for storage of hazardous wastes. The site accepted materials, including hazardous wastes, from several installations, including AAFB, Bolling Air Force Base, the Washington Naval Yard, the Navy Research Laboratory, the Naval Surface Warfare Center (NSWC)-Indian Head Ordnance Station, and White Oak Laboratory (now known as NSWC-White Oak). Drums of waste solvents, capacitors and transformers containing polychlorinated biphenyls (PCBs) were stored at the DRMO. Records indicate there were two burn pits used for disposal and burn of waste and several above and below ground tanks.

Site Responsibility

Cleanup of this site is the responsibility of the federal government.

NPL Listing History

This site was proposed to the National Priorities List of the most serious uncontrolled or abandoned hazardous waste sites requiring long-term cleanup action on July 28, 1999. The site was formally added to the list May 10, 1999, making it eligible for federal cleanup funds.

Threats and Contaminants

Two sources located at the DRMO site were evaluated in the documentation record: soil contaminated with polychlorinated biphenyls (PCBs) and semi-volatile organic compounds in a groundwater contaminant plume. Contamination resulted from the management and disposal of wastes, particularly volatile organic

compounds (VOCs), in on site in tanks, drums, warehouses, aboveground storage tanks, underground storage tanks, and burn pits. A transformer storage area was located in the eastern portion of the site. Hazardous wastes were stored directly on the ground.

Observed releases of VOCs to ground water and PCBs to surface water (wetlands) are documented. The surface water migration pathway for the DRMO site includes wetlands located immediately down gradient (to the north and west) from the DRMO property. The surface water flows through a wooded area and eventually joins to form a tributary of Timothy Branch. The Timothy Branch flows south from the Brandywine Area and joins the Mattawoman Creek about three miles south of the site. Wetlands are located along Timothy Branch and Mattawoman Creek for their entire lengths within the 15-mile target distance limit. The State of Maryland has designated Mattawoman Creek and its 100-year flood plain and area of critical concern under the Coastal Zone Management Act; the area is a migratory corridor for anadromous species of fish. The State of Maryland has designated all stretches of Timothy Branch Creek and Mattawoman Creek Class I waters -- that is, waters allowing contact recreation and the propagation of fish and other aquatic life and wildlife. Mattawoman Creek downstream of the site is a fishery.

Cleanup Progress

In 1989, the AF initiated and removed PCB contaminated soil on site. Then in Sept. 1996, the AF issued a Decision Document for the installation of horizontal extraction wells and a treatment system to treat the contaminated groundwater. According to the information provided by AAFB and MDE, at the last minute AAFB changed the design from horizontal wells to an on-site interceptor trench with a treatment system. AAFB explained that the design change was because they did not receive access to off site areas and that private parties wanted compensation. Following the construction of the interceptor trench, AAFB and MDE disputed the issue of permit requirements for the treatment system for almost four years. The treatment system was subsequently turned on. Because the majority of the contamination is off site, the treatment is unable to capture and treat the entire groundwater contaminant plumes.

EPA accepted the final Work Plan for the remedial investigation and feasibility study (RI/FS) in October 2001. The AF and its contractor began sampling activities in December 2001. As of June 2002, EPA, Maryland Department of the Environment (MDE) and Prince George County Health Department (PGCHD) reviewed the Technical Memorandum for the phase 1 investigation. Based upon the phase 1 investigation, it was determined that additional field work must be conducted to complete the remedial investigation at the site. Unfortunately, Andrews Air Force Base did not receive additional money to fund the phase 2 investigation until September 2002. As a result, phase 2 was delayed for 5 months. Phase 2 will further characterize the extent of the groundwater contamination. In addition, surface water/sediment and soil samples will be collected. This data is needed to complete the ecological risk assessment.

The phase 1 investigation did not identify any dense non-aqueous phase liquids (DNAPLs) in groundwater. If present, DNAPLs can control the extent of the groundwater contamination and its fate and transport. The cost of the investigation increased because of significant technical differences between the AF and EPA's approach to characterize the groundwater contamination. Historically, the AF documented contamination as high as 65,000 parts per billion (ppb) or 65 parts per million (ppm) of TCE. The maximum contaminant level (MCL) for TCE is 5 ppb.

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